



# Gate Valves Type Bolted Bonnet Class 150 DN 50-1200 (2" – 48") Carbon, Alloy and Stainless Steel



## Fig. VC150BB

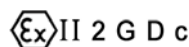
Design:

API 600, API 603 & ISO 10434

ASME B16.34, API 603 and BS 1414



600-0016

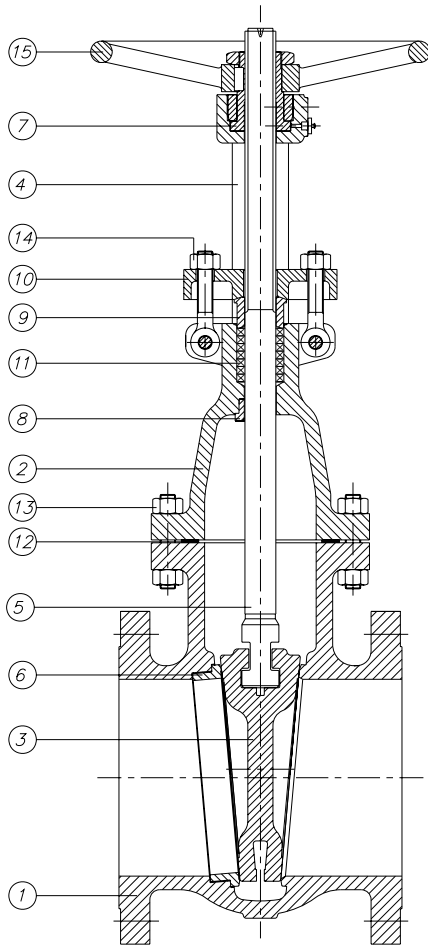




# Gate Valves Class 150

## Type Bolted Bonnet

### Parts and materials



#### Trim Material

API 600 Trim No.	Stem / Backseat	Seating Surface Body / Wedge
1	13% Cr	13% Cr
2	SS 304	SS 304
3	SS310	SS310
4	13% Cr	13% Cr (Hard)
5 or 5A	13% Cr	HF
6	13% Cr	13% Cr / Cu Ni
7	13% Cr	13% Cr / 13% Cr (Hard)
8 or 8A	13% Cr	HF / 13% Cr
9	Monel	Monel
10	SS 316	SS 316
11 or 11A	Monel	HF / Monel
12 or 12A	SS 316	HF / SS 316
13	Alloy 20	Alloy 20
14 or 14A	Alloy 20	HF / Alloy 20

**HF: Hard Facing using CoCr welding alloy (Stellite)**

Item	Description	Material			
		Carbon Steel	Carbon Steel (Low Temp.)	Alloy Steel	Stainless Steel
1	Body	A 216 Gr.WCB	A 352 Gr.LCB	A 217 Gr.C5	A 351 Gr.CF8M
2	Bonnet	A 216 Gr.WCB	A 352 Gr.LCB	A 217 Gr.C5	A 351 Gr.CF8M
3	Wedge	A 216 Gr.WCB + ER410	A 352 Gr.LCB + ER308	A 217 Gr.C5 + ER410	A 351 Gr.CF8M
4	Yoke	A 216 Gr.WCB	A 352 Gr.LCB	A 217 Gr.C5	A 351 Gr.CF8M
5	Stem	A 182 Gr.F6a	A 182 Gr.F304	A 182 Gr.F6a	A 182 Gr.F316
6	Seat Ring	A 105 + Stellite	A 182 Gr.F304	A 182 Gr.F6a + Stellite	-----
7	Stem Nut	B 148 / A 439 Gr.D2	B 148 / A 439 Gr.D2	B 148 / A 439 Gr.D2	B 148 / A 439 Gr.D2
8	Backseat	A 182 Gr.F6a	A 182 Gr.F304	A 182 Gr.F6a	-----
9	Gland	A 105	A 105	A 182 Gr.F6a	A 182 Gr.F316
10	Gland Flange	A 105	A 105	A 105	A 182 Gr.F304
11	Stem Packing	Graphited	Graphited	Graphited	Graphited
12	Gasket	Corrugated Soft Iron	Corrugated Soft Iron	Corrugated SS 304	Corrugated SS 316
13	Bonnet Bolt & Nut	A 193 Gr.B7 / A 194 Gr.2H	A320 Gr. L7 / A194 Gr. 7	A 193 Gr.B7 / A 194 Gr.2H	A 193 Gr.B7 / A 194 Gr.2H
14	Eye Bolt & Nut	A 193 Gr.B7 / A 194 Gr.2H	A 193 Gr.B7 / A 194 Gr.2H	A 193 Gr.B7 / A 194 Gr.2H	A 193 Gr.B7 / A 194 Gr.2H
15	Handwheel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel

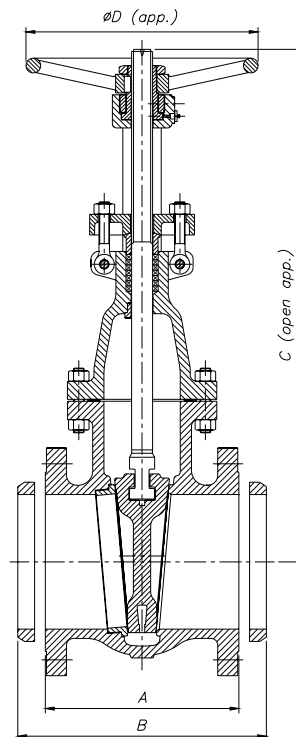
Item 6 and 8 only in Carbon Steel and Alloy Steel construction



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## Type Bolted Bonnet

### Dimensions



DN	A	B	C	$\varnothing D$	WEIGHT
50 (2")	178	216	400	200	20
65 (2½")	190	241	445	200	28
80 (3")	203	282,5	485	250	33
100 (4")	229	305	600	250	55
125 (5")	254	381	725	300	70
150 (6")	267	403	765	300	90
200 (8")	292	419	985	350	130
250 (10")	330	457	1220	450	225
300 (12")	356	502	1395	500	330
350 (14")	381	572	1500	559	450
400 (16")	406	610	1775	559	530
450 (18")	432	660	2000	610	625
500 (20")	457	711	2210	610	825
550 (22")	483	762	2530	660	1150
600 (24")	508	813	2725	660	1210
650 (26")	559	902	2800	711	1415
700 (28")	610	991	3130	711	1620
750 (30")	610	991	3300	813	2025
800 (32")	711	1219	3420	813	2450
900 (36")	711	1219	3975	864	3050
1050 (42")	813	1397	4370	915	4250
1200 (48")	864	1397	4850	1100	6300

(\*) Dimensions in mm and weight in kg.



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### General Characteristics, Cv, P&T Rating

GENERAL CHARACTERISTICS		Fig. VC150BB		
<b>DESIGN STANDARDS</b>				
Valves design	API 600, API 603 & ISO 10434 ASME B16.34		BS 1414	
End to End Dimensions	ASME B16.10 & ISO 5752			
Flanged Dimensions	ASME B16.5 & ISO 7005-1 Part. 1	ASME B16.47	BS 3293	MSS SP-44
Buttweld Dimensions	ASME B16.25			
Visual Inspection	MSS SP- 55			
Marking	MSS SP-25 & ISO 5209			
<b>TESTS AND CERTIFICATES</b>				
Pressure testing	API 598 & ISO 5208	BS 6755 Part. 1	MSS SP-61	
Other	ATEX, CE			

#### Cv Values in U.S. Gallons/min.

DN	Cv	DN	Cv
50 (2")	250	450 (18")	26100
65 (2½")	450	500 (20")	33500
80 (3")	620	550 (22")	42000
100 (4")	1160	600 (24")	50000
125 (5")	1900	650 (26")	59500
150 (6")	2700	700 (28")	69200
200 (8")	5100	750 (30")	79000
250 (10")	8050	800 (32")	91200
300 (12")	12050	900 (36")	115500
350 (14")	15100	1050 (42")	158000
400 (16")	20300	1200 (48")	197000

#### Pressure-Temperature (STANDARD CLASS According to ASME B16.34)

Temp °C	MATERIAL			
	A216 WCB Bar	A352 LCB Bar	A217 C5 Bar	A351 CF8M (**) Bar
-29 to 38	19,6	18,3	20,0	18,9
95	17,9	17,2	17,9	16,2
150	15,8	15,8	15,8	14,8
205	13,8	13,8	13,8	13,4
260	11,7	11,7	11,7	11,7
315	9,6	9,6	9,6	9,6
345	8,6	8,6	8,6	8,6
375	7,6		7,6	7,6
400	6,5		6,5	6,5
425	5,5		5,5	5,5
450	4,5		4,5	4,5
485	3,4		3,4	3,4
510	2,4		2,4	2,4
540	1,4		1,4	1,4
565			1,4 *	1,4 *
595			1,4 *	1,4 *
620			1,4 *	1,4 *
650			1,4 *	1,4 *
675				1,4 *
705				1,4 *
735				1,4 *
760				1,4 *
790				1,4 *
815				1,4 *

\* FOR WELD END VALVES ONLY. FLANGED END RATINGS TERMINATE AT 540°C

\*\* A351 CF8M at temperatures over 538°C (1000°F) to be used only if Carbon contents is 0,04% or higher.